

SPARE YOU ONE OF THE 'CLUTCH RIDERS'?

Even Slight Pressure on Clutch When Not Necessary Reduces Power.

By H. CLIFFORD BROKAW.

Are you a clutch rider? Does your foot continually rest upon the pedal controlling this important part of your car? If so, you are unconsciously wasting power and are helping put the clutch into a condition where it will slip permanently. Spend a few minutes studying your clutch, its makeup and principles on which it works, learn how to keep it in condition and likewise learn to keep your foot off the pedal when it is not required to be there and you need never have any trouble from this device.

Now about clutch riding. The man who keeps his foot continually on the pedal exerts some pressure—however slight and though the weight of the foot—which has a tendency to release the spring tension and make the clutch slip. Slipping is a waste of power and there is a friction which wears away the contact surfaces, adding all the while to the slipping propensity. You should not act as though fearing a need to release the clutch all the time. When the clutch is released go automatically into place.

On some cars clutch riding will invariably burn out the thrust bearing, due to the mechanical construction. There are some other cars, however, where a careful driver may safely rest his foot on the pedal, if pressure sufficient to release the clutch is not exerted.

Clutches are of two general types, the cone and the multiple disk, the latter being either dry or running in oil bath, commonly called wet, and this kind will not go dry on July 1 if you care anything about the power of your car. The cone clutch usually is built into the flywheel, the inside of the rim forming one of the friction surfaces. Very often the wet disk clutch is integral with the crank case and its oil bath is a part of the general oil supply carried therein.

The purpose of the clutch is to connect and disconnect the engine and the rear (drive) wheels, so that the engine may continue running without driving the car and to relieve the load from the transmission gears when they are shifted to the various positions and speeds. If the load were not taken off the gears when shifting, it would be impossible to make the shift in any case, and if the shift were by chance effected there would be excessive strain put on the gears and very likely teeth would be broken off. When the load is off the gears at the time of the shift the teeth engage before the load is applied. If it were not so the full load would be on the teeth at the moment they touched. Gears are made to stand severe knocks and strains, but teeth break with the best of cars and shifting would leave few corners on the teeth.

All the clutches in use, except perhaps the magnetic, are of the friction variety, that is, the power is transmitted by the friction of the parts, which are held together with a spring. And all provide for the load to be picked up gradually. If the clutch were positive in action, by the engagement of lugs or otherwise, the car speed at once would be that of the engine and it would start off with a jerk, with all its discomfort and strain; it would be the same as though there were no clutch intervening. And the clutch must be kept in shape to allow this gradual engagement. In a leather faced cone clutch when the leather becomes hard the engagement is sudden, you have a gripping clutch and a jerky action. To prevent and remedy this the leather must be made soft by applying neatfoot oil or castor oil.

On the other hand, too much oil will make the clutch slip, with the resultant loss of power. Sometimes the oil from the engine or transmission gear case and make the leather greasy. On the road the best thing to do is to shake in some French chalk, talc or fuller's earth to absorb the excess oil and dry the surface. Use it sparingly. In the garage it is better to wipe off the surface with kerosene—gasoline dries the leather and also the excess oil. The plates of the dry multiple disk clutch usually are faced with asbestos. Usually there is an opening in the bottom of the clutch housing to permit any

oil which works in from engine or transmission to drain off instead of greasing the plates and facings. It is very important to keep these free from oil for that will make the clutch slip, and if it is allowed to remain too long may become sticky and prevent easy release of the plates. If they begin to slip and are found free from oil it may be possible to overcome it by increasing the spring tension; usually it indicates that the facings are worn and should be replaced. At the service stations usually plates with facing attached may be procured, the old plates being turned in, obviating the particular job of riveting on the facings. You cannot do a satisfactory job of cutting your own facings. The material comes only in clutch sizes and shapes, and even if your clutch is old and out of make the facing manufacturer can supply you with the right size.

If this type of clutch grips and there is not a lot of sticky oil on the plates a trace of oil applied to the facing will ease it—be careful, for too much will make it slip. Use drops, not a squirt from the can.

The wet multiple disk clutch runs in oil, usually the bath connected with the engine. It does not require much more than to clean it out with kerosene when the crank case is cleaned. If it slips there is nothing to do but tighten the spring, or to loosen it if it grips and is not dirty. If in a separate housing not connected with the engine oil supply and there is slipping a little kerosene added to the bath will help—when it acts harsh add more oil and makes shifting gears easier. The adjustment must be kept right, for if the action is too quick it will stop the clutch and actually make shifting harder.

The bearings of the clutch pedal and linkage also need to be oiled occasionally and kept clean if you are to have easy action.

NEW CHANDLER IS POPULAR.

Biggest Demand Ever for Well Known Car.

Branch managers and dealers are making frequent trips to the factories these days to get the best possible delivery of cars which meet to some extent the unprecedented demand. Each visit finds the factories getting into greater production, which of course means that the tension gradually will be relieved. But enough cars to go around will not be turned out for some time yet.

Motor B. Hulet of the Brady-Murray Motors Corporation just returned from one of these trips to the Chandler factory in Cleveland. He found everything at fever heat and considerable headway being made. He was able to get some extra cars for May deliveries, but could not get anywhere near enough cars to fill all the orders on the books.

"The present demand for the new Chandler Sixes is beyond anything I have experienced in New York," said Mr. Hulet. "It seems as if the new design which gives the new Chandler a larger appearance is just what the people wanted added to the well known chassis and snappy engine. By increasing the size of the hood and radiator of both the seven passenger touring and the roadster models our designers have made them 'big cars' without changing the well known Hudson Super Six name and speed. They have done big things with little changes and added materially to the all-around appearance of the cars."

"We are in close touch with the factory operations and know that every effort is being made to catch up with unusual demand. Eventually we are going to have enough cars to go around, but as orders have to be filled in rotation the wise man will get his order in at the earliest moment and make his place in line secure."

Ford Lubrication.

There are three principal points to be watched in the lubrication of the Ford car, the crankcase supply of course, the universal joint and the differential gears.

Thinning Cement.

The attention of car owners should be directed to the inadvisability of thinning rubber cement with ordinary gasoline, which contains too much oil to be safe for that purpose. Oil is a deadly foe of rubber. High test gasoline or kerosene of carbon are the proper agents for thinning rubber cement.

INTERESTING NEW TIRE MAKING HERE

Carlisle Cord Tires Are Made of Separate Strands of Rope.

There is widespread interest throughout the automobile trade in the new method of tire construction introduced by the Carlisle Cord Tire Company, Inc., of Andover, Mass., which has resulted in the production of a tire—the Carlisle cord—that has amazing strength and durability.

The Carlisle is enjoying great popularity now because it has the O. K. of race drivers and owners who are hard drivers and race extensively every summer. In discussing this tire, which he sells in this territory, J. Edward Demar of the Carlisle Sales Company, Inc., at 227 West Fifty-eighth street, near Broadway, said:

"Our tires are made of sturdy rope, a single strand of which has a breaking resistance of 255 pounds. Two piles of rope are used in the carcass. These piles are separated by a thick cushion of rubber. The rope is used in continuous strands—un-cut and unbroken. The strands are held round by the inner layer. Each strand of rope is heavily insulated with rubber and no two strands touch or rub at any point."

"When strands cannot touch they cannot rub and rubbing is what generates heat or friction. Friction is the heat disease of tires. Our tires are cool at sixty miles an hour. This absence of friction means longer life."

"It was necessary to get special machinery to turn out our tires, and their ready acceptance by the motoring public has enabled our factory to expand amazingly, so that within a very few months the output will be far ahead of anything we had anticipated for this year. When the big new factory in Stamford, Conn., is completed the company will be in an exceptionally advantageous location to give Carlisle tires in this territory service of an unusual kind."

BIG HUDSON DEMAND SHOWN.

Harry Hout Takes Many Orders Without Demonstrator.

"Judging from the results of our preliminary announcement in the papers last week advising our customers to 'wait for the new Hudson Super Six,' we are going to have trouble in meeting the demands of the public for the car," says Harry S. Hout, president of the Hudson Motor Car Company of New York.

"Although we did not even have a demonstrator car to show our customers," continued Mr. Hout, "we have already taken over 200 orders for the car in this territory, which I think is a wonderful tribute to the reputation and integrity of the Hudson Super Six line."

"It also proves that the public knew the new car was worth waiting for, as they figured that the same engineers responsible for the first Hudson Super Six, which has made good in the hands of 60,000 satisfied owners, were responsible for the new model and in it they would find the expression of their greater knowledge."

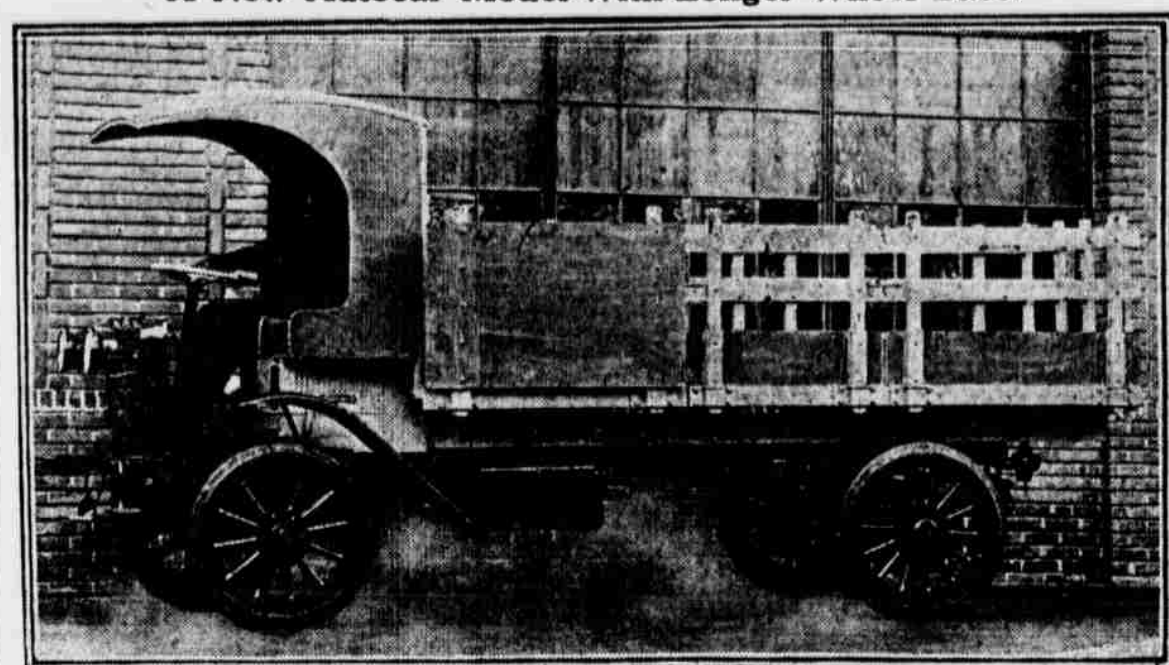
"In this way it will not be disappointed, as the new car reveals four years' experience with 60,000 cars which has enabled our engineers to free the chassis from many annoyances regarded as inevitable in all cars."

"You know," concluded Mr. Hout, "that there never have been enough Hudson Super Sixes to equal the demand, and for this reason it is well to remember that those who buy early will get almost immediate delivery, while those who delay in placing their orders will have to wait."

Back Lash in Camshaft.

Back lash, which is simply another name for lost motion, when it occurs in the camshaft driving gears must be taken up in the direction of rotation when the clearance is adjusted.

A New Autocar Model With Longer Wheel Base.



The Autocar Company of Ardmore, Pa., announces that in addition to the standard 97 inch wheel base with a chassis price of \$2,050, it now has ready for distribution a 120 inch wheel base with a chassis price of \$2,150. Both are rated at one and a half to two ton capacity. The shorter wheel base will accommodate bodies up to 10 feet in length and the longer bodies up to 12 feet.

The Autocar motor truck has become recognized as an ideal motor equipment for city streets and congested quarters because of its short wheel base, standard at 97 inches. This length has rendered it easy to maneuver the Autocar at all times and has given it command of situations where motor truck operation would seem impossible.

This longer wheel base Autocar meets the hauling needs of certain lines of business where the average load tends to bulk.

This new chassis is identical in construction with the standard chassis except that longer frame members, brake cables and drive shaft are used and an extra cross member is added at the front end of the rear side sponges. Retaining all of the distinctive features of Autocar design, this model extends the many advantages of that design to an even broader scope of hauling requirements.

With the motor under the seat even this longer wheel base is still two feet shorter than would be possible with the same body and the motor under a hood as in the ordinary passenger car construction. The great factor of unusual handiness is thus retained.

There is the same saving in the dead weight of the motor truck itself, the same even distribution of load with its equalization of strain on wearing parts and tires and the same economical and efficient application of the developed power to the primary object of moving your paying load quickly and dependably through city streets.

And behind this new Autocar model stands as in the past the carefully developed system of Autocar after sale service through a complete chain of direct factory branches and dealers extending from coast to coast.

GOOD REASONS FOR GOOD ROADS

Advantages Galore for Sections Opened Up by Them Throughout Country.

There is a worthy movement on foot for better roads. Every business man, every home provider, and every motorist should support it. Good roads benefit all classes of people in their everyday life.

This vast country has grown so enormously and so fast that its railroads cannot deliver the goods nor carry the people as the prosperity of the country and present demands require.

With good roads the farmer can deliver all his products direct to towns within a radius of fifty or more miles and though making more profit himself, he is reducing the high cost of living. The merchant is able to take advantage of new sources of supply, to buy his stock under favorable conditions, and give it on sale to his customers in less time than he could have secured delivery by the slower and costlier railway express and freight service. With motor trucks he can then redeliver to his customers and give better service over a larger territory. Automobile delivery will increase his business, lessen his cost and increase his profits.

Millions of dollars are lost every year through perishable goods spoiling on the railroads because of freight delays and over distances of a hundred or more miles has already become a profitable business where good roads exist. Single large firms have actually saved over \$100,000 yearly by using motor trucks and they will undoubtedly contribute largely to organized improvement of roads.

Good roads are a paying investment. Local authorities in cities, towns and counties should act without delay to meet the growing national and local demands before trade goes in other directions. It is almost impossible to get back the lost advantage after other districts have won it.

Good roads bring automobiles. They spend money. Good roads bring trade, and increase property values. They attract home seekers and industries.

EXPORT OUTLOOK FINE FOR COLE CO.

Pablo Homs Has Established Relations With All the Important Countries.

With the end of the world war and the resumption of private trade activities throughout foreign lands, the Cole Motor Car Company is beginning to reap the benefits of the extensive promotion campaign which it carried on during the past four years in the export field through its Foreign Trade Department, in New York.

During the entire period of the war, the Cole Company kept in constant touch with foreign markets, and although it was impossible to ship many cars out of this country, with the exception of those which went to Japan, Cuba, South America and the West Indies, Pablo Homs, export manager of the Cole organization, was able to establish representation in points all over the world subject to the removal of restrictions on private trade enterprises.

At the present time, therefore, with the foreign markets opening up, the Cole Company finds itself besieged with orders for cars for foreign shipment and has increased its allotment of cars for export several times over that which it has been at any previous period in its history.

In order to get an intimate survey of conditions in the foreign field as they now exist and to put himself in touch with anticipated trade developments abroad, Mr. Homs will leave early this month for an extended trip through the European countries, during the course of which he will visit all of the more important foreign commercial centers.

Since the beginning of his promotion activities for Cole, Mr. Homs has established permanent relations for the Cole Company in Norway, China, Holland, Spain, France, Denmark, Sweden, Italy, Russia, Poland and with the distributors in South America, Mexico, Cuba, Australia, Hawaii and the West Indies has laid the foundation for an extended foreign trade that will have a significant relation to the domestic activities of the Cole Company.

The Cole Aero-Eight, the product of the Cole Motor Car Company, has made a favorable impression in all foreign markets. In Cuba it annexed a celebrated victory for speed on the Oriental Park track in Havana, by lowering by several seconds the former track record held by Bob Burman in a Blitzen Benz. A short time ago a standard Cole Aero-Eight Roadster won the 150 and 115-mile road races in Montevideo against a field of well-known cars.

Shipments are leaving the Cole factory daily for foreign points, and it is estimated that between 10 and 20 per cent of the total production of the Cole factory will be assigned to purchasers of cars abroad during 1919.

KEYSTONE CO. MAKES DENIAL.

Has No Connection With Savoid Tire Process.

In contradiction to the story that has found considerable circulation that the Keystone Tire and Rubber Company is interested in the Savoid tire process, this has been firmly denied in an interview today with one of the directors of the Keystone company.

"In our 'second' tire business," this director states, "we handle only factory surplus stock, and the very highest grade of factory selected 'seconds.' The slices in which are so insignificant that the tires are practically as good as first quality. Our other tires, namely, Keystone and Hattavia, are, of course, 'first' tires, and well known to the motoring world."

"In regard to this Savoid tire process, we have no connection or dealings in any way with the parties exploiting this made over tire."

"All the tires that the Keystone company markets are standard, nationally known for the service they give."

"We are making this statement because of the fact that we have of late been receiving many letters and telephone inquiries in regard to the Savoid tire process and are at a loss to understand how our name should have become associated with it."

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FRANKLIN Four-Passenger Roadster

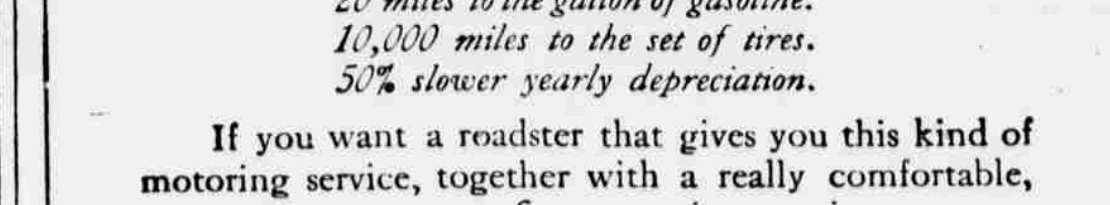
Unique in Its Roominess Clever in Its Compactness

The seating plan of this car is a patented Franklin design, combining four-passenger capacity with the intimate, convenient features of an individual car.

Franklin Direct Air-Cooling eliminates freezing troubles and does away with the complication of 177 unnecessary water-cooling parts. The simplicity typifies Franklin Light Weight Construction, which gives the motorist the utmost of reliability, comfort, and safety, and makes the daily record of operation read

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10,000 miles to the set of tires.
50% slower yearly depreciation.

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Enamelling to Prevent Rust.
In order to do away with rusting of parts beneath the hood, black enamel may be resorted to with good effect. It is possible to get black enamel today, which, when properly applied, looks little inferior to the baked-on variety. Ordinary enamels which dry quickly are of little use, as they chip and flake off quickly. Parts to be enameled should, if possible, be taken off and cleaned with a stiff wire brush. The enamel should be applied with a stiff varnish brush. The enamel may take as long as a week to dry and must be used to have an atmosphere free from excessive dust; that means not to try it in the upper story of a hay barn. Parts that may be enameled to advantage include steel fan blades, pulley arms, brackets and elbows, nuts that are not often disturbed, exposed pieces of shafting, pinion wheels, centres, operating rods, collars, etc. Even a cylinder casting may be so treated, as a good enamel will stand heat without blistering.

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